

**REMARKS**

This is a full and timely response to the outstanding final Office Action mailed August 4, 2004 (Paper No. 6). Upon entry of this response, claims 2, 4-5, 8, 11, 14, 16-18, 21, 23-25, 29, 31-32 and 34-42 are pending in the application. In this response: claims 2, 4-5, 8, 11, 14, 16-18, 21, 23-25, 29, and 31-32 have been amended; claims 1, 3, 6-7, 9, 12-13, 15, 19-20, 22, 26, 28, 30 and 33 have been cancelled; and claims 34-42 have been added. Applicant respectfully requests that the amendments being filed herewith be entered and request that there be reconsideration of all pending claims.

1. **Allowable Subject Matter**

Applicant acknowledges the Examiner's indication in the Office Action that claims 2, 8, 14, 21, and 29 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

Applicant has amended claims 2, 8, 14, 21, and 29 accordingly. Applicant has also amended claims 4-5, 11, 16-18, 23-25, and 31-32 to depend from claims 2, 8, 14, 21 and 29. Therefore, Applicant respectfully submits that claims 2, 4-5, 8, 11, 14, 16-18, 21, 23-25, 29, and 31-32 are in condition for allowance.

2. **Claim Objections**

Claims 1, 7, and 14 have been objected to for various informalities. Claims 1, 7, and 14 are cancelled and the objection to these claims is therefore rendered moot.

3. Amendments to the Specification

Several amendments to the specification have been made in this response to correct typographical errors. Applicant respectfully asserts that no new matter has been added by the amendments, and requests the Examiner to enter the above amendments.

4. Rejection of Claims 13, 16-20, and 23-26 under 35 U.S.C. §102

Claims 13, 16-20, and 23-26 have been rejected under §102(b) as allegedly anticipated by *Tzannes* (U.S. 6,498,808). Claims 13, 19-20 and 26 are cancelled without prejudice, waiver, or disclaimer, and the rejection of these claims is therefore rendered moot. Applicant takes this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicant reserves the right to pursue the subject matter of these cancelled claims in a continuing application, if Applicant so chooses, and does not intend to dedicate any of the cancelled subject matter to the public. Claims 16-18 have been amended to depend from allowable claim 14. Claims 23-25 have been amended to depend from allowable claim 21. Applicant therefore respectfully submits that the rejection of claims 16-18 and 23-25 has been overcome, and requests that the rejection be withdrawn.

5. Rejection of Claims 1, 4-7, 10-12, 28, and 31-33 under 35 U.S.C. §103

Claims 1, 4-7, 10-12, 28, and 31-33 have been rejected under §103(a) as allegedly obvious over *Tzannes* (U.S. 6,498,808) in view of *Helms et al.* (U.S. 6,144,695). Claims 1, 6-7, 9, 12, 15, 22, 28, 30, and 33 are cancelled without prejudice, waiver, or disclaimer, and the rejection of these claims is therefore rendered moot. Applicant takes this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicant reserves the right to pursue the subject matter of these cancelled claims in a continuing application, if Applicant so chooses, and does not intend to dedicate any of

the cancelled subject matter to the public. Claims 4 and 5 have been amended to depend from allowable claim 2. Claim 11 has been amended to depend from allowable claim 8. Applicant therefore respectfully submits that the rejection of claims 4, 5, and 11 has been overcome, and requests that the rejection be withdrawn.

6. New Claims

Applicant submits that no new matter has been added in new claims 34-42. Applicant submits that new claim 34 is allowable over the cited prior art, for at least the reason that the cited prior art does not teach, disclose, or suggest the feature of “a tone ordering element configured to assign bits to at least a portion of the tones in an interleaved manner such that adjacent tones have different bit densities.”

Applicant submits that new claim 37 is allowable over the cited prior art, for at least the reason that the cited prior art does not teach, disclose, or suggest the feature of “a tone ordering element configured to assign bits to the tones, the tone ordering element comprising...logic for interleaving a least a portion of those bits assigned to adjacent tones.”

Applicant submits that new claim 40 is allowable over the cited prior art, for at least the reason that the cited prior art does not teach, disclose, or suggest the feature of “assigning data bits to at least a portion of the tones in an interleaved manner such that adjacent tones have different bit densities.”

Applicant submits that new claims 41and 42 are allowable over the cited prior art, for at least the reason that the cited prior art does not teach, disclose, or suggest the feature of “assigning data bits to at least a portion of the tones in an interleaved manner such that adjacent tones have different bit densities.”

Applicant submits that new claims 41 is allowable over the cited prior art, for at least the reason that the cited prior art does not teach, disclose, or suggest the feature of “interleaving those bits assigned to adjacent tones.” For at least the above reasons, Applicant requests the Examiner to enter and allow the above new claims.

**CONCLUSION**

Applicant respectfully requests that all outstanding objections and rejections be withdrawn and that this application and presently pending claims 2, 4-5, 8, 11, 14, 16-18, 21, 23-25, 29, 31-32 and 34-42 be allowed to issue. If the Examiner has any questions or comments regarding Applicant's response, the Examiner is encouraged to telephone Applicant's undersigned counsel.

Respectfully submitted,

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& RISLEY, L.L.P.**

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